



Quarterly Early Warning Bulletin for Food and Agriculture



Alerts on threats to the food chain and food security
in countries and regions

The **Quarterly Early Warning Bulletin for Food and Agriculture** integrates information on food security and threats to the food chain for the three months ahead. It is a product of collaboration between the **Emergency Prevention System (EMPRES)** for transboundary animal and plant pests and diseases and food safety threats, the **Global Information and Early Warning System (GIEWS)**, and the Intelligence and Coordination Unit of the **Food Chain Crisis Management Framework (FCC)**. Data is provided by GIEWS and EMPRES.

Highlights

- The unprecedented Ebola virus disease outbreak continues to impact the food security, economies and livelihoods in the three worst-hit western African countries: Guinea, Liberia and Sierra Leone. In total, 27,573 confirmed, probable and suspected cases of Ebola have been reported in the three most affected countries, with 11,246 deaths as of 8 July. Liberia is reporting three new cases of Ebola after the World Health Organization declared the country free of the disease on 9 May 2015.
- In West Africa, Highly Pathogenic Avian Influenza (H5N1) is spreading in poultry (in Burkina Faso, Côte d'Ivoire, Ghana, Niger and Nigeria).
- Human cases of the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) continue to be reported in Saudi Arabia.
- The ongoing outbreak of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) in the Republic of Korea (South Korea) is the largest outside the Arabian Peninsula.
- The presence of El Niño has raised concerns in the areas where the 2015 main cropping season has just started, including East Africa, most of Central America, and South Asia, where recent unfavorable weather impaired the production outlook in several countries; however the preliminary 2015 rice production forecast for Asia still stands above the reduced level of 2014.
- In South Sudan, about 4.6 million people are severely food insecure, due to displacement, civil insecurity and high food prices in conflict-affected areas.
- In Nepal, deteriorating prospects for the 2015 main season crops are foreseen due to the earthquake that struck the country in late April, resulting in a severe loss of seeds and agricultural tools in the most affected areas.

Regional issues

Africa

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- In Burkina Faso, Côte d'Ivoire, Ghana, Niger and Nigeria, Highly Pathogenic Avian Influenza (H5N1) is spreading in poultry.
- In West Africa, in total, 27,573 confirmed, probable and suspected cases of Ebola have been reported in the three most affected countries, Guinea, Liberia and Sierra Leone with 11,246 deaths as of 8 July. Liberia is reporting three new cases of Ebola after the World Health Organization has declared the country free of the disease on 9 May 2015.
- The highly invasive and polyphagous Asian fruit fly *Bactrocera dorsalis* (= *invadens*) has now spread across all countries in sub Saharan Africa due to lack of well-coordinated regional/continental wide programmes. Asian fruit fly continues to be a major threat to the livelihoods of millions of people who depend on fruits and vegetables for food, intra and inter-regional trade, income and employment.
- Due to conflict escalation in some countries of Central and East Africa, there is an increased risk of Foot-and-mouth disease (FMD), Brucellosis, *Peste des petits ruminants* (PPR) and Lumpy skin disease (LSD) putting at risk livestock populations, livelihoods and food security.
- In southern Africa, Foot-and-mouth disease (FMD) outbreaks are often associated with infection in wild animals (e.g. Zimbabwe and Mozambique). Severe drought in Namibia this year may have increased regular movement of cattle from Namibia to Angola to graze.
- Eucalyptus forests in Malawi, Mozambique, South Africa, and Zimbabwe, are at high risk of Red gum lerp psyllid insect outbreak.
- High risk of armyworm outbreaks in Eritrea, Ethiopia, Kenya, Malawi, and Tanzania.
- Risk of Tomato borer (*Tuta absoluta*) outbreaks in Burundi, the Democratic Republic of the Congo, Guinea, Guinea-Bissau, Malawi, Mozambique, Rwanda, South Sudan, Uganda, Zambia, and Zimbabwe.
- In East Africa, the presence of El Niño has raised concerns where the 2015 main cropping season has just started.

Near East & North Africa

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- In Egypt, Highly Pathogenic Avian Influenza (H5N1) is spreading in poultry and humans. Risk of further spread of Highly Pathogenic Avian Influenza (H5N1) from Egypt to Libya.
- In Near East, there is a resurgence of Middle East Respiratory Syndrome (MERS-CoV) where cases continue to be reported in Saudi Arabia and the United Arab Emirates. While human to human transmission is involved, some cases remain with unexplained source of infection. Camels are identified as potential source of infection; however, ways of virus transmission to humans remain unclear.
- Algeria has reported new outbreaks of Foot-and-mouth disease (FMD) type O. The sociopolitical situation in Libya increased the risk of spread between countries by informal animal movement and products by communities leaving the country.
- In Near East, Lumpy skin disease (LSD) continues to be a risk for continued spread in the region, impacting livelihoods and food

security.

- In Israel and the West Bank, Highly Pathogenic Avian Influenza (H5N1) occurrence in poultry is decreasing, but is still under monitoring.
- For shrimp species *Penaeus monodon* and *Penaeus vannamei* there is high risk of spread of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS) to Iran and Iraq.
- Morocco reported a new outbreak of *Peste des petits ruminants* (PPR) in June 2015. Since 2009 Morocco did not report any occurrence of PPR. There is a risk of further spread in the country and along borders with neighboring PPR endemic territories.

Asia & the Pacific

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- The current MERS-CoV outbreak in the Republic of Korea is now the largest outbreak outside the Arabian Peninsula.
- In China and Southeast Asia, high risk of Avian Influenza (H5N1, H7N9, H5N2, H5N3, H5N6, H5N8) outbreaks, with potential spread within endemic countries and to free areas.
- In China, confirmed outbreaks of Porcine epidemic diarrhea virus (PEDV) in pigs, with potential spread to neighboring at-risk countries.
- High risk of further spread of the shrimp disease Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps *Penaeus monodon* and *Penaeus vannamei*.
- In South Asia, the presence of El Niño has raised concerns where the 2015 main cropping season has just started and recent unfavorable weather impaired the production outlook in several countries. However, the preliminary 2015 rice production forecast for Asia still stands above the reduced level of 2014.

Europe & Central Asia

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- Risk of further spread of Foot-and-mouth disease (FMD), African swine fever (ASF), Lumpy skin disease (LSD), Brucellosis and Anthrax in Central Asia and Caucasus.
- Risk of continued occurrence of Saiga die-off in Central Asia as a result of Hemorrhagic septicaemia. The Saiga is migratory wildlife found in Kazakhstan, Mongolia, Russia, Uzbekistan and sometimes Turkmenistan.

Latin America & Caribbean

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- New cases of Classical swine fever (CSF) and risk of further spread of Porcine epidemic diarrhea virus (PEDV) and Bovine paralytic rabies (BPR) in countries of Central America.
- High risk of further spread of the shrimp disease Acute hepatopancreatic necrosis disease (AHPND), also known as early mortality syndrome (EMS), to shrimps (*Penaeus vannamei*).
- High risk of further spread of the shrimp disease *Enterocytozoon hepatopenaei* (EHP) to shrimps *Penaeus vannamei* through live animals (e.g. live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
- In most of Central America, the presence of El Niño has raised concerns where the 2015 main cropping season has just started.

AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
Angola	<i>Threats to the food chain</i>	Moderate	Increased outbreaks of Foot-and-mouth disease (FMD) in cattle near the border with Namibia.
Benin	<i>Threats to the food chain</i>	Low-Moderate	Risk of incursion of HPAI H5N1 from neighboring countries.
Botswana	<i>Threats to the food chain</i>	Moderate	Risk of further spread of Foot-and-mouth disease (FMD) to free areas.
Burkina Faso	<i>Threats to the food chain</i>	High	As of 10 July, 26 outbreaks of HPAI H5N1 in poultry were reported in 6 provinces out of 45. No human cases to date.
	<i>Widespread lack of access</i>		<p><i>Massive influx of refugees from Mali puts additional pressure on local food supplies</i></p> <ul style="list-style-type: none"> Over 32 000 Malian refugees are estimated to be living in the country as of March 2015. About 371 000 people are estimated to be in need of food assistance according to the last “Cadre Harmonisé” analysis.
Burundi	<i>Threats to the food chain</i>	High	Risk of Tomato borer (<i>Tuta absoluta</i>) from neighboring countries.
Cameroon	<i>Threats to the food chain</i>	High	Risk of incursion of HPAI H5N1 from other countries in the region.
	<i>Severe localized food insecurity</i>		<p><i>Influx of refugees exacerbating food insecurity of the host communities</i></p> <ul style="list-style-type: none"> The number of refugees from the Central African Republic (CAR), which mainly entered East, Adamaua and North regions, was estimated at 244 000 in late May 2015. About 74 000 refugees from Nigeria mainly entered the Far North region since May 2013. <p><i>Displacement</i></p> <ul style="list-style-type: none"> Insecurity along the borders with Nigeria has led to the internal displacement of 106 000 individuals.
Cape Verde	<i>Threats to the food chain</i>		Risk of spread of African swine fever (ASF). Since March 2015, outbreaks of ASF have occurred in two Islands.

AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
Central African Republic	<i>Exceptional shortfall in aggregate food production/supplies</i>		<p><i>Conflict, displacements and constraints in available supplies</i></p> <ul style="list-style-type: none"> The IDP caseload, as of late May, was estimated at about 426 240 persons. In addition, floods in late April affected about 4 600 individuals. In April 2015 about 1 268 000 people, out of a total population of 4.6 million, were estimated to be in need of food assistance. The significant tightening of available supplies of animal food products has driven up the cost of animal protein.
	<i>Unfavourable prospects for current crops</i>		The widespread conflict, which caused large scale displacements, the loss and the depletion of the households' productive assets and input shortages, is expected to severely affect the outcome of the current cropping season.
Chad	<i>Threats to the food chain</i>	Low	Desert Locust. Small-scale breeding with onset of the rains in North Sahel.
	<i>Widespread lack of access</i>		<p><i>Large influx of refugees puts additional pressure on local food supplies</i></p> <ul style="list-style-type: none"> Over 460 000 people from the Sudan's Darfur region, the Central African Republic and northern Nigeria, as well as the return of an estimated 340 000 Chadians, have put added pressure on local food supplies negatively affecting food security. Over 660 000 people are estimated to be in need of food assistance according to the last "Cadre Harmonisé" analysis.
the Congo	<i>Severe localized food insecurity</i>		<p><i>Influx of refugees straining the already limited resources of host communities</i></p> <p>As of late May 2015, about 25 000 refugees from the CAR are sheltering in the country.</p>
Côte d'Ivoire	<i>Threats to the food chain</i>	Moderate - High	Incursion of HPAI H5N1 in poultry occurred in April-May 2015. Increased risk of further spread exists because poultry production in this country has increased by 40 percent during the last decade.
the Democratic Republic of the Congo	<i>Threats to the food chain</i>	High	Risk of Tomato borer (<i>Tuta absoluta</i>) from neighboring countries.
			Epizootic ulcerative syndrome (EUS) is currently suspected (since January 2015). High risk of spread to other African water bodies from one lake or river system to another endangering susceptible fish species. Factors include heavy rainfall and flooding poor biosecurity, including movement of infected fish, as well as natural spread by fish and birds.

AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
	<i>Severe localized food insecurity</i>		<p><i>Conflict and displacements in eastern provinces</i></p> <ul style="list-style-type: none"> As of May 2015, the total number of IDPs was estimated at more than 3 million. An estimated 7 million people are in need of urgent humanitarian assistance (June 2015). <p><i>Influx of refugees straining on already limited resources of host communities</i></p> <ul style="list-style-type: none"> As of late May, refugees from the CAR, mainly hosted in the northern Equateur Province, were estimated at about 97 000.
Djibouti	<i>Widespread lack of access</i>		<p><i>Inadequate pasture availability due to consecutive unfavourable rainy seasons</i></p> <p>About 160 000 people are severely food insecure, mainly in pastoral southeastern areas and in the Obock region.</p>
Eritrea	<i>Threats to the food chain</i>	Low	Desert Locust. Small-scale breeding with onset of the rains in western lowlands.
		Moderate	Wheat rust diseases may develop.
		High	Risk of Armyworm outbreak.
	<i>Widespread lack of access</i>		Vulnerability to food insecurity due to economic constraints.
Ethiopia	<i>Threats to the food chain</i>	High	Risk of Armyworm outbreak.
	<i>Severe localized food insecurity</i>		<p><i>Reduced localized crop production</i></p> <p>About 3.2 million people are in need of humanitarian assistance, mainly in pastoral areas.</p>
	<i>Unfavourable prospects for current crops</i>		Poor and erratically-distributed rains has lowered production prospects for the 2015 minor “belg” season crops.
Gambia	<i>Exceptional shortfall in aggregate food production/supplies</i>		<p><i>Below-average crop production</i></p> <ul style="list-style-type: none"> Cereal production is estimated to have decreased by 28 percent in 2014 compared to the average. Over 178 000 people are estimated to be in Phase 3: “Crisis” and above according to the last “Cadre Harmonisé” analysis. An additional 522 000 people are estimated to be at risk of food insecurity (Phase 2: “Stressed”).

AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
Ghana	<i>Threats to the food chain</i>	High	Four outbreaks of HPAI H5N1 occurred in poultry in April-June 2015. Risk of further spread is considered high.
Guinea	<i>Threats to the food chain</i>	High	According to WHO data, 18 new confirmed cases of Ebola virus disease (EVD) were reported in the week ending 5 July. Risk of continuous human to human transmission. In addition, cases were reported from a widening geographical area in Guinea and Sierra Leone, and the continued occurrence of cases that arise from unknown sources of infection highlights the challenges still faced in finding and eliminating every chain of transmission.
			Risk of Tomato borer (<i>Tuta absoluta</i>) from Senegal.
	<i>Widespread lack of access</i>		<p><i>Impact of the Ebola Virus Disease (EVD) outbreak</i></p> <ul style="list-style-type: none"> EVD has had a serious negative impact on economic activities and livelihoods, gravely affecting the food security situation of large numbers of people. About 393 000 people are estimated to be in need of food assistance according to the last “Cadre Harmonisé” analysis.
Guinea-Bissau	<i>Threats to the food chain</i>	High	Risk of Tomato borer (<i>Tuta absoluta</i>) from Senegal.
	<i>Exceptional shortfall in aggregate food production/supplies</i>		<p><i>Below-average crop production</i></p> <ul style="list-style-type: none"> Cereal production was estimated to have decreased by 34 percent in 2014 compared to the average. Over 126 000 people are estimated to be in Phase 3: “Crisis” and above according to the last “Cadre Harmonisé” analysis. An additional 406 000 people are estimated to be at risk of food insecurity (Phase 2: “Stressed”).
	<i>Threats to the food chain</i>	Moderate-High	Wheat rust diseases may develop.
		Moderate	Continued spread of Foot-and-mouth disease (FMD) serotype SAT2 impacting livelihoods and food security.
		High	Risk of Armyworm outbreak.
	<i>Severe localized food insecurity</i>		<p><i>Reduced second season crop production and worsening pasture conditions</i></p> <p>About 1.6 million people are severely food insecure, mainly located in central and northeastern counties.</p>

AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
	<i>Unfavourable prospects for current crops</i>		Late and erratic rains affected “long-rains” cereal crop production in southern and eastern parts of the country.
Lesotho	<i>Severe localized food insecurity</i>		<p><i>Reduced crop production</i></p> <ul style="list-style-type: none"> Food security conditions expected to remain strained in 2015/16. Reflecting the slightly reduced 2015 maize output, an estimated 463 936 people require assistance, up 3 percent from last year.
Liberia	<i>Threats to the food chain</i>	Low-Moderate	According to WHO data, Liberia is reporting three new cases of Ebola after the World Health Organization declared the country free of the disease on 9 May 2015. At present, these cases are considered to constitute a separate outbreak from that which was declared over on 9 May. Risk of spread of the virus is still high.
	<i>Widespread lack of access</i>		<p><i>Impact of the EVD outbreak</i></p> <ul style="list-style-type: none"> EVD has had a serious negative impact on economic activities and livelihoods, gravely affecting the food security situation of large numbers of people. About 722 000 people are estimated to be in need of food assistance according to the last “Cadre Harmonisé” analysis.
Madagascar	<i>Threats to the food chain</i>	High	<p>Migratory Locust plague. The second campaign (September 2014-August 2015) of the Three-year Programme (2013-2016), aiming to a decline of the plague, is coming to an end. No major locust developments are expected in July-September.</p> <p>High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND).</p>
	<i>Severe localized food insecurity</i>		<p><i>Flooding and reduced crop production in southern regions</i></p> <ul style="list-style-type: none"> Cyclones Chedza and Fundi caused flooding in early 2015, affecting approximately 265 000 people. Food insecurity remains severe in southern regions, due to limited cereal availability, while dry weather is expected to result in a third successive depressed cereal output in 2015 in these areas.
Malawi	<i>Threats to the food chain</i>	Moderate-High	Red Locust: swarm formation.
		Moderate	Eucalyptus forests are at risk of spread of Red gum lerp psyllid insect.
		High	Risk of Tomato borer (<i>Tuta absoluta</i>) from neighbouring countries.

AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
	<i>Severe localized food insecurity</i>		Risk of Armyworm outbreak.
			<p><i>Reduced crop production</i></p> <ul style="list-style-type: none"> • Flooding, mainly in the Southern Region, caused the displacement of 230 000 people, severely aggravating food security conditions and affecting a total of 616 000 people. • The reduced 2015 maize production (22 percent below average) is expected result in an increase in the number of people requiring assistance, from the low level of 2014.
Mali	<i>Threats to the food chain</i>	Low	Desert Locust. Small-scale breeding with onset of the rains in north.
		Low-Moderate	Ebola outbreak imported from a country affected with Ebola. Already 8 cases and 6 deaths confirmed as of 3 December. Risk of occurrence of new cases and further human-to-human transmission.
	<i>Widespread lack of access</i>		<p><i>Droughts, floods, population displacements and insecurity in northern areas</i></p> <ul style="list-style-type: none"> • Over 410 000 people are estimated to be in Phase 3: "Crisis" and above according to the last "Cadre Harmonisé" analysis. • An additional 2.7 million people are estimated to be at risk of food insecurity (Phase 2: "Stressed").
Mozambique	<i>Threats to the food chain</i>	Moderate-High	Red Locust: swarm formation.
		High	Risk of Tomato borer (<i>Tuta absoluta</i>) outbreak.
		Moderate	Eucalyptus forests are at risk of spread of Red gum lerp psyllid insect.
		High	Risk of further spread of Foot-and-mouth disease (FMD) outbreak in Magude and Massingir, in southern province of Gaza. The affected area is in the FMD control zone near Kruger National Park in South Africa and Limpopo National Park in Mozambique. The current drought situation in the region is contributing to the concentration of high number of animals around a few water bodies and increasing the movement of susceptible animals and interactions with wildlife species.
			High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps (<i>Penaeus monodon</i>) from

AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
	<i>Severe localized food insecurity</i>		infected broodstock, post-larvae and live animals (e.g. live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
			<p><i>Flooding in central provinces and reduced localized crop production</i></p> <ul style="list-style-type: none"> An estimated 409 000 people were affected by floods mainly in the central Zambezia Province, with crop and stock losses reported. Crop production in 2015 is estimated just below last year's good output, resulting in an overall stable food security situation.
Namibia	<i>Threats to the food chain</i>	Low-Moderate	Risk of further spread of Foot-and-mouth disease (FMD) types SAT-1/SAT-2 to FMD free official recognized zones. FMD is endemic in the Caprivi Region, where wild buffalo are considered a reservoir.
Niger	<i>Threats to the food chain</i>	Low	Desert Locust. Small-scale breeding with onset of the rains in North Sahel.
		High	One outbreak of HPAI H5N1 in poultry in the country reported in April 2015. Risk of further spread is high. No human cases reported.
	<i>Widespread lack of access</i>		<p><i>Recurrent severe food crisis</i></p> <ul style="list-style-type: none"> About 1 158 000 people are estimated to be in Phase 3: "Crisis" and above according to the last "Cadre Harmonisé" analysis. Over 49 000 Malian refugees and 105 000 Nigerian refugees are estimated to be living in the country as of June 2015. Severe depletion of household assets and high levels of indebtedness.
Nigeria	<i>Threats to the food chain</i>	Moderate	Continued spread of HPAI H5N1 in poultry. Nigeria has reported HPAI H5N1 in poultry for the first time since 2008. Between December 2014 and 9 June 2015, 448 outbreaks of HPAI H5N1 were reported in 18 out of 36 states. HPAI H5N1 was first detected in December 2014 in live bird market in Lagos. Transmission of HPAI H5N1 in poultry appears to be reduced by control measures implemented.
Rwanda	<i>Threats to the food chain</i>	Moderate-High	High flow of refugees and their livestock from Burundi with an associated increased risk of occurrence of TADs particularly Foot-and-mouth disease (FMD, Lumpy skin disease (LSD) and <i>Peste des petits ruminants</i> (PPR).
		High	Risk of Tomato borer (<i>Tuta absoluta</i>) from neighboring countries.

AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
Senegal	<i>Threats to the food chain</i>	Low	Ebola case (one case confirmed as of 13 October 2014) imported from a country with Ebola transmission. Risk of continuous introduction of new cases and further human-to-human transmission.
	<i>Exceptional shortfall in aggregate food production/supplies</i>		<p><i>Below-average crop production</i></p> <ul style="list-style-type: none"> • Cereal production in 2014 was estimated 20 percent below the average. • Over 1 040 000 people are estimated to be in Phase 3: "Crisis" and above according to the last "Cadre Harmonisé" analysis. An additional 3.1 million people are estimated to be at risk of food insecurity (Phase 2: "Stressed").
Seychelles	<i>Threats to food chain, public health, and environment</i>	High	Native vegetation and agricultural crops have been attacked by a species of moth believed to be from the genus <i>Euproctis</i> . Their hairy caterpillars are causing major national panic with great repercussions on public health, food security, the environment, and the economy.
Sierra Leone	<i>Threats to the food chain</i>	High	According to WHO data, 9 new confirmed cases of Ebola virus disease (EVD) were reported in the week to 5 July 2015. In addition, cases were reported from a widening geographical area in Guinea and Sierra Leone, and the continued occurrence of cases that arise from unknown sources of infection highlights the challenges still faced in finding and eliminating every chain of transmission.
	<i>Widespread lack of access</i>		<p><i>Impact of the EVD outbreak</i></p> <ul style="list-style-type: none"> • Disruption to markets, farming activities and livelihoods, seriously affecting the food security situation of large numbers of people. • About 1 092 000 people are estimated to be in need of food assistance according to the last "Cadre Harmonisé" analysis.
Somalia	<i>Severe localized food insecurity</i>		<p><i>Conflict, civil insecurity and reduced localized crop production</i></p> About 730 000 people are estimated to be in need of emergency assistance, mainly IDPs and poor households in southern and central regions.
	<i>Unfavourable prospects for current crops</i>		Production of the 2015 "gu" season crops in central and southern areas has been affected by floods in Shabelle Region as well as by the early cessation of rains in May.
South Africa	<i>Threats to the food chain</i>	Moderate	Eucalyptus forests are at high risk of spread of Red gum lerp psyllid insect.

AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
			Epizootic ulcerative syndrome (EUS) is currently suspected (since January 2015).
South Sudan	<i>Threats to the food chain</i>	Low-Moderate	Foot-and-mouth disease (FMD) outbreaks in cattle near the border with Uganda – possible further spread to the north.
		High	Risk of Tomato borer (<i>Tuta absoluta</i>) from neighboring countries.
	<i>Severe localized food insecurity</i>		<p><i>Conflict, civil insecurity and reduced crop production in conflict-affected areas</i></p> <ul style="list-style-type: none"> • Over 2 million people have been internally displaced since the conflict erupted at the end of 2013. • About 4.6 million people are severely food insecure, mainly in Jonglei, Unity and Upper Nile states, due to early depleted food stocks and difficult access for aid delivery.
Togo	<i>Threats to the food chain</i>	High	Risk of incursion of HPAI H5N1 from neighboring countries affected by the virus.
Uganda	<i>Threats to the food chain</i>	Moderate-High	Wheat rust diseases may develop.
		Low-Moderate	Foot-and-mouth disease (FMD) spread within the Karamoja Region with devastating socioeconomic impact and risk of spread to neighboring countries through common grazing areas at borders used by livestock pastoralists.
		High	Risk of Tomato borer (<i>Tuta absoluta</i>) from neighboring countries.
	<i>Severe localized food insecurity</i>		<p><i>Below-average crop production</i></p> <p>About 180 000 people in Karamoja Region are estimated to be severely food insecure as food stocks were depleted in February, one month earlier than usual.</p>
	<i>Unfavourable prospects for current crops</i>		Late and erratic rains affected first season cereal crop production in central and eastern bimodal rainfall areas of the country.
the United Republic of Tanzania	<i>Threats to the food chain</i>	Moderate	Wheat rust diseases may develop.
			Red Locust. Concentration of adult populations up to swarm formation.
		High	Risk of Armyworm outbreak.
	<i>Unfavourable prospects for current crops</i>		Late and erratic rains affected “msimu” crop production in some central uni-modal rainfall areas as well as “masika” crop production in some northern bimodal rainfall areas.

AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
Zambia	<i>Threats to the food chain</i>	Moderate-High	Red Locust: swarm formation.
		High	Risk of Tomato borer (<i>Tuta absoluta</i>) from neighboring countries.
		Moderate	Risk of Armyworm outbreak.
		High	Continuous outbreak of Epizootic ulcerative syndrome (EUS). High risk of spread to other African water bodies from one lake or river system to another endangering susceptible fish species. Factors include heavy rainfall and flooding poor biosecurity, including movement of infected fish, as well as natural spread by fish and birds.
Zimbabwe	<i>Threats to the food chain</i>	High	Outbreaks on Eucalyptus forest plantations of three major insect pests (Bronze bug, Red gum lerp psyllid and Blue gum chalcid) reported. Pest management efforts using biological control are in progress. The insects are likely to spread into neighboring countries.
		High	Risk of Tomato borer (<i>Tuta absoluta</i>) from neighboring countries.
		Moderate	Risk of Armyworm outbreak.
		Moderate	Risk of further spread of Foot-and-mouth disease (FMD) to free areas.
	<i>Exceptional shortfall in aggregate food production/supplies</i>		<p><i>Sharply reduced 2015 maize production</i></p> <ul style="list-style-type: none"> • Maize production is estimated at 742 000 tonnes, 39 percent below the five-year average. • As a result of a tight domestic supply situation, the number of people estimated to require assistance increased to 1.49 million well above the level of 2014 (564 599 people) but below the 2.2 million estimated in 2013.

NEAR EAST & NORTH AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
Algeria	<i>Threats to the food chain</i>	High	Outbreaks of Foot-and-mouth disease (FMD) serotype O was reported in cattle and small ruminants. Vaccination campaigns are on-going on cattle. Risk of FMD transmission from non-vaccinated populations (including non-vaccinated small ruminants).
Egypt	<i>Threats to the food chain</i>	High	Continuous outbreaks of HPAI H5N1 in poultry and cases in humans. Egypt has reported since December 2014 an increased number of outbreaks and detections of HPAI H5N1 viruses in poultry as compared to previous months or to the same period in previous years. Between 1 December 2014 and 9 June 2015, 504 outbreaks in poultry were reported in Egypt, while between 1 December 2013 and 9 June 2014 there were only 108. Between 1 January and 9 of June 2015, 131 human cases, including 25 deaths, were reported in the country comparing to three human cases in the same period in 2014. The number of human cases in Egypt started rising at the end of 2014 with 22 human cases, including six deaths, during the month of December alone.
			Risk of further spread of Low Pathogenic Avian Influenza H9N2 in humans. Three cases in humans recently occurred.
		Moderate-High	Further spread of Lumpy skin disease (LSD) in cattle.
Iran	<i>Threats to the food chain</i>	High	Dieback of Buxus forest caused by Boxwood Blight is continuing in the north of the country due to continued drought. This is affecting nearly 70 000 ha of endemic species of Buxus tree which is on the International Union for Conservation of Nature (IUCN) list.
			Decline of oak forest in Zagros region caused by biotic and abiotic stresses including drought. The oak decline has a negative impact on the livelihood of nomad people and water shed management. Operations to minimize the drought effect are in progress.
			High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps (<i>Penaeus monodon</i>) from infected brood-stock, post-larvae and live animals (e.g. live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
Iraq	<i>Threats to the food chain</i>	High	High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps (<i>Penaeus monodon</i>) from infected brood-stock, post-larvae and live animals (e.g. live polychaetes, clams, oysters,

NEAR EAST & NORTH AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
			etc.) used as feeds for broodstock.
	<i>Exceptional shortfall in aggregate food production/supplies</i>		<p><i>Escalation of the conflict and large internal displacement</i></p> <ul style="list-style-type: none"> • Over 2 million people have been displaced since January 2014. • 1.8 million beneficiaries (IDPs, non-displaced food insecure in conflict areas and food insecure host families) are receiving food assistance. • Internal trade restrictions and reduced access to stocks held in the areas under ISIL control.
Israel	<i>Threats to the food chain</i>	Moderate	HPAI H5N1 has spread in Israel in commercial poultry from January to May 2015.
Jordan	<i>Threats to the food chain</i>	Moderate	Risk of spread of Lumpy skin disease (LSD).
Kuwait	<i>Threats to the food chain</i>	Moderate	Recent outbreaks of Lumpy skin disease (LSD). Previous occurrence in the country in 1991.
Lebanon	<i>Threats to the food chain</i>	High	Continuous loss of pine nut production due to abiotic and biotic reasons.
		Moderate	Risk of spread of Lumpy skin disease (LSD).
Libya	<i>Threats to the food chain</i>	Moderate	Further spread of HPAI H5N1 in poultry with risk of new incursions due to informal movement and trade of poultry products from Egypt at borders.
		High	Further spread of Foot-and-mouth disease (FMD) type O.
Mauritania	<i>Threats to the food chain</i>	Low	Desert Locust. Small-scale breeding with onset of the rains in south.
	<i>Widespread lack of access</i>		<p><i>Influx of refugees puts additional pressure on local food supplies and high food prices constrain access</i></p> <ul style="list-style-type: none"> • More than 52 000 Malian refugees remain in southeastern Mauritania as of June 2015. • Over 465 000 people are estimated to be in Phase 3: "Crisis" and above according to the last "Cadre Harmonisé" analysis.

NEAR EAST & NORTH AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
Morocco	<i>Threats to the food chain</i>	Moderate-High	Risk of incursion of Foot-and-mouth disease (FMD) serotype O from a neighboring country is continuing. A vaccination campaign in high risk areas is being implemented.
		High	New outbreak reported of <i>Peste des petits ruminants</i> (PPR) in small ruminants. First outbreak reported since 2009 and high risk of further spread in the country.
Oman	<i>Threats to the food chain</i>	Moderate	Reoccurrence of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) infection (1 case) in a human in May 2015.
Qatar	<i>Threats to the food chain</i>	Moderate	Reoccurrence of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) infections (2 cases) in humans in May 2015.
Saudi Arabia	<i>Threats to the food chain</i>	Moderate	Reoccurrence of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) cases in humans.
the Syrian Arab Republic	<i>Exceptional shortfall in aggregate food production/supplies</i>		<p><i>Worsening civil conflict</i></p> <ul style="list-style-type: none"> • Agricultural production significantly affected by conflict. • An estimated 12.2 million people are in need of humanitarian assistance. • Although some international food assistance is being provided, Syrian refugees are also putting strain on other host communities in neighbouring countries. • 2.1 million people receiving food assistance in neighbouring countries and 4.5 million within the country.
the Sudan	<i>Threats to the food chain</i>	Low	Desert Locust. Small-scale breeding with onset of the rains in interior.
	<i>Severe localized food insecurity</i>		<p><i>Conflict and civil insecurity</i></p> <p>The number of people estimated to be in need of humanitarian assistance, mainly IDPs in conflict-affected areas, is set at 1.5 million.</p>
Tunisia	<i>Threats to the food chain</i>	High	Outbreaks of Foot-and-mouth disease (FMD) serotype O have been reported and vaccination is being conducted in cattle around infected farms; however, small ruminants are not being vaccinated. This implies an ongoing risk of FMD transmission from non-vaccinated populations (including non-vaccinated small ruminants).

NEAR EAST & NORTH AFRICA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
The West Bank and Gaza Strip	<i>Threats to the food chain</i>	Moderate-High	HPAI H5N1 has spread in commercial poultry from January to April 2015. Risk of further spread.
the United Arab Emirates	<i>Threats to the food chain</i>	Moderate	Reoccurrence of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) infections (6 cases) in humans in May-June 2015.
Yemen	<i>Threats to the food chain</i>	Low	Desert Locust. Small-scale breeding with onset of the rains in interior.
		Moderate - High	Wheat rust diseases may develop.
	<i>Widespread lack of access</i>		<p><i>Conflict, poverty, and high food and fuel prices</i></p> <ul style="list-style-type: none"> • The IPC indicative analysis released in June 2015 classified 10 (out of 22) governorates as facing a food insecurity “Humanitarian Emergency” (IPC Phase: 4), all affected by the ongoing armed conflict. Nine governorates were classified as facing a food security “Crisis” (IPC Phase: 3). • Of the 12.9 million food insecure people across the country, about 6.1 million were in “Humanitarian Emergency” Phase, while 6.8 million were in “Crisis” Phase. • The level of food insecurity increased by 21 percent compared to the previous year.

ASIA & THE PACIFIC			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
Afghanistan	<i>Threats to the food chain</i>	Moderate-High	Moroccan and Italian locust infestations in the north.
	<i>Severe localized food insecurity</i>		<p><i>Continuing conflict and population displacement</i></p> <ul style="list-style-type: none"> • 2.1 million people are classified as very severely food insecure • Over 700 000 people are internally displaced, mostly in Helmand Province. • 1.7 million people targeted with food assistance.
Bahrain	<i>Threats to the food chain</i>	Moderate	Spread of Foot-and-mouth disease (FMD) outbreaks reported during March 2015.

ASIA & THE PACIFIC			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
China	<i>Threats to the food chain</i>	Moderate	Several Avian Influenza subtypes are found in China. In April-June 2015, 20 additional human cases of LPAI H7N9 were reported.
			New serotype of Avian Influenza (HPAI H5N3) outbreak in September. Risk of spread to neighboring countries.
			Continuing outbreaks of HPAI H5N6 (9 outbreaks reported since December 2014). Risk of spread and potential impact on livelihoods and food security.
			Recent outbreaks of Foot-and-mouth disease (FMD) serotype A in swine and cattle.
Democratic People's Republic of Korea	<i>Widespread lack of access</i>		<p><i>Dry weather affects the 2015 early and main season food crops</i></p> <ul style="list-style-type: none"> Poor rains negatively impacted on the 2015 potato, wheat and barley crops, an important food source during the lean season (May-September), and adversely affected plantings of the main food crops If drought conditions persist in 2015, cereal production is likely to decline sharply, adversely impacting on the already fragile food security and worsening conditions compared to previous years, when most households were already estimated to have borderline and poor food consumption.
India	<i>Threats to the food chain</i>	Low	Desert Locust. Small-scale breeding with onset of the rains in Rajasthan.
		Moderate	Several outbreaks of HPAI H5N1 since November 2014. Risk of further spread and potential impact on livelihoods and food security.
		High	High risk of further spread of <i>Enterocytozoon hepatopenaei</i> (EHP) to shrimps <i>Penaeus monodon</i> through live animals (e.g. live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
			High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps (<i>Penaeus monodon</i> and <i>Penaeus vannamei</i>) from infected broodstock, post-larvae and live animals (e.g. live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
Indonesia	<i>Threats to the food</i>	Moderate	Risk of HPAI H5N1 and potential impact on livelihoods and food security.

ASIA & THE PACIFIC			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
	<i>chain</i>	High	High risk of spread to the country of Enterocytozoon hepatopenaei (EHP) to shrimps <i>Penaeus vannamei</i> through live animals (e.g. live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
Japan	<i>Threats to the food chain</i>	Moderate	Recent infections of HPAI H5N8 in wild birds and risk of further spread.
Mongolia	<i>Threats to the food chain</i>	Moderate	Further spread of Foot-and-mouth disease (FMD) outbreaks reported during March-June 2015 in Mongolia. During January and February 2015 outbreaks of Sheep and goat pox (SGP) were reported.
			Risk of new outbreaks of Sheep and goat pox.
		Low-Moderate	Risk of Classical swine fever outbreak.
Myanmar	<i>Threats to the food chain</i>	High	Further spread of HPAI H5N1 and potential impact on livelihoods and food security.
Nepal	<i>Threats to the food chain</i>	High	Risk of several Transboundary animal diseases (rabies, Newcastle disease, HPAI, Anthrax, PPR, FMD) due to the precarious animal health situation in the aftermath of the earthquake.
			<p><i>Impact of the April earthquake</i></p> <ul style="list-style-type: none"> The earthquake that struck Nepal on 25 April resulted in huge devastation across central and western parts of Nepal, severely impacting food security of large numbers of people Nearly 9 000 were confirmed dead, some 16 800 injured and at least 500 000 homes destroyed Severe losses to seeds and agricultural tools have deteriorated prospects for the 2015 main season crops, posing a further threat to household food security from October onwards, when the main season crops will be harvested
the Philippines	<i>Threats to the food chain</i>	Moderate	In June 2015, a new case of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) infection was detected in a human, due to a patient who returned from a travel in Middle East. Since first appearance of the disease in March 2012, this is the third case

ASIA & THE PACIFIC			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
			occurring in the Philippines.
Pakistan	<i>Threats to the food chain</i>	Low	Desert Locust. Small-scale breeding with onset of the rains near Indian border.
the Republic of Korea	<i>Threats to the food chain</i>	High	Spread of HPAI H5N8 continues. Risk of further spread.
			Recent outbreaks of Foot-and-mouth disease (FMD) serotype O in swine and cattle. Further spread within the country by uncontrolled animal movement.
			Further human to human transmission of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) from May 2015 due to an exported case from Middle East. A cluster of cases in a hospital in Seoul is still going on. The Republic of Korea has reported for the first time on 11 May 2015. As of 10 June 2015, 107 cases with 10 deaths were reported with one index case and secondary and thirdly infection cases.
Sri Lanka	<i>Threats to the food chain</i>	High	High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps (<i>Penaeus monodon</i>) from infected broodstock, post-larvae and live animals (e.g. live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
Viet Nam	<i>Threats to the food chain</i>	High	Recent outbreaks of Avian Influenza (H5N1 and H5N6) in backyard poultry and risk of further spread.
		Moderate	Risk of introduction of a new strain of Avian Influenza (H7N9) from a neighboring country, causing risk to human health and economic hardships for the people.
		High	Recent outbreaks of Foot-and-mouth disease (FMD), reported in May 2015, (serotype A) in cattle and buffaloes.

EUROPE & CENTRAL ASIA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
Armenia	<i>Threats to the food chain</i>	Low	Italian Locust. Unlikely significant developments.
		Moderate	Further spread of Brucellosis in humans.
Azerbaijan	<i>Threats to the food chain</i>	Moderate	Moroccan and Italian Locust infestations are expected to slightly increase compared to 2014.
Georgia	<i>Threats to the food chain</i>	Moderate	Italian Locust. Risk in the southeast, especially along the Azeri border.
			Cases of Anthrax have been reported in humans and animals.
Kazakhstan	<i>Threats to the food chain</i>	Moderate-High	Italian, Moroccan and Migratory locusts. Control operations started in May and should cover almost 3.9 million ha of land in 2015.
		Moderate	One outbreak of HPAI (H5N1) was reported in wild birds in April 2015 with risk of further spread to domestic poultry.
		Moderate-High	Cases of Hemorrhagic septicaemia with thousands of animal deaths have been reported in wild ruminants (134 252 wild antelopes) with potential spread to domestic species. The Saiga is a critically endangered (IUCN) antelope species that lives primarily in Kazakhstan. The May 2015 outbreak killed over one-third of the world's remaining Saiga. The Saigas are migratory animals found in Kazakhstan, Mongolia, Russia, Uzbekistan and sometimes Turkmenistan.
Kyrgyzstan	<i>Threats to the food chain</i>	Moderate-High	Moroccan and Italian Locusts are in a caution phase. The control campaign started in April. It is planned to treat 65 000 ha of land (mainly against the Moroccan Locust) in 2015.
		Moderate	Risk of further spread of Foot-and-mouth disease (FMD) in cattle.
the Russian Federation	<i>Threats to the food chain</i>	Moderate	Moroccan, Italian and Migratory locusts. The ongoing locust hopper development will continue in June. Locust treatments, which started in May, might cover 1 million ha in 2015.
			Recent cases of African swine fever (ASF) in wild boars. Risk of spread to neighboring countries.

EUROPE & CENTRAL ASIA			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
			One outbreak of Avian Influenza (H5N1) was reported in April 2015 in wild birds and there is some risk of further spread to domestic poultry.
Tajikistan	<i>Threats to the food chain</i>	Moderate	Moroccan and Italian locusts. Control operations, mainly against Moroccan Locust, started in late March.
Turkey	<i>Threats to the food chain</i>	High	Chestnut trees. Risk of spread of Chestnut gall wasp.
			Recent outbreaks of HPAI H5N1 in commercial poultry. Risk of further spread within the country.
Turkmenistan	<i>Threats to the food chain</i>	Moderate	Moroccan Locust. No information available but hatching of Moroccan Locust should have started in April and mating and egg-laying ongoing.
Uzbekistan	<i>Threats to the food chain</i>	Moderate	Moroccan, Italian, and Migratory locusts. Control operations, which started in April, are planned on more than 400 000 ha of land in 2015.

LATIN AMERICA & CARIBBEAN			
COUNTRY	TYPE OF THREAT	LEVEL	DESCRIPTION
Colombia	<i>Threats to the food chain</i>	High	High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps (<i>Penaeus vannamei</i>) from infected broodstock, post-larvae and live animals (e.g., live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
Guatemala	<i>Threats to the food chain</i>	High	High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps (<i>Penaeus vannamei</i>) from infected broodstock, post-larvae and live animals (e.g. live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
Honduras	<i>Threats to the food chain</i>	High	Conifer forests are affected by a severe outbreak of Bark beetles. A 10 000 ha of conifer forests are affected.

			High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps (<i>Penaeus vannamei</i>) from infected broodstock, post-larvae and live animals (e.g. live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
Nicaragua	<i>Threats to the food chain</i>	Moderate	Newcastle disease was detected in May 2015 during epidemiological monitoring in border regions with Costa Rica, in the south of the country, in the municipalities of Cárdenas and San Juan del Sur. Risk of further spread within the country and at border with Costa Rica.
		High	High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps (<i>Penaeus vannamei</i>) from infected broodstock, post-larvae and live animals (e.g., live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
Panama	<i>Threats to the food chain</i>	High	High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps (<i>Penaeus vannamei</i>) from infected broodstock, post-larvae and live animals (e.g., live polychaetes, clams, oysters, etc.) used as feeds for broodstock.
Peru	<i>Threats to the food chain</i>	High	High risk of spread to the country of Acute hepatopancreatic necrosis disease (AHPND), also known as Early Mortality Syndrome (EMS), to shrimps (<i>Penaeus vannamei</i>) from infected broodstock, post-larvae and live animals (e.g. live polychaetes, clams, oysters, etc.) used as feeds for broodstock.

Information Sources

Desert Locust

FAO Desert Locust Information Service (DLIS)
www.fao.org/ag/locusts

Madagascar locust

- Bulletins of the Locust Watch Unit (available at <http://www.fao.org/emergencies/crisis/madagascar-locust/en/>)
- Locust Situation Updates

Locust in Caucasus and Central Asia:

- National monthly bulletins on locust situations in CCA
- Report of the annual Technical Workshop on Locusts in CCA (17-21 November 2014, Tbilisi, Georgia)

Wheat rust disease

- Global wheat rust monitoring system

Transboundary Animal Diseases (TADs)

- Global Animal Disease Information System (EMPRES-i) (<http://empres-i.fao.org/eipws3g/>)
- Global Early Warning System (GLEWS) at FAO
- World Health Organization <http://apps.who.int/ebola/>
- OIE World Animal Health Information Database (WAHID) Interface http://www.oie.int/wahis_2/public/wahid.php/Wahidhome/Home

Early Mortality Syndrome/Acute hepatopancreatic necrosis disease (EMS/AHPND)

FAO. 2013. Report of the FAO/MARD Technical Workshop on Early Mortality Syndrome (EMS) or Acute Hepatopancreatic Necrosis Syndrome (AHPNS) of Cultured Shrimp (available at <http://www.fao.org/docrep/018/i3422e/i3422e00.htm>.)

Ebola virus disease

WHO. Ebola Situation Report 08 July 2015 (available at http://apps.who.int/ebola/sites/default/files/atoms/files//who_ebola_situation_report_08-07-2015.pdf?ua=1)

Threats to Food Security

FAO. 2015. Crop Prospects and Food Situation, No 2, July 2015 (available at <http://www.fao.org/3/a-l4773E.pdf>)

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